

REMARKS

INFORMATION DISCLOSURE STATEMENT

A complete Information Disclosure Statement, together with copies of all references, is supplied herewith.

DRAWINGS

Permission is requested to amend Figure 1 to add the reference character A, together with lead line, as shown in red in the attached Figure 1. The official action noted that the drawing was missing the reference numeral 38, but we find that numeral 38 and appropriate lead line does appear in the drawing of record. For the Examiner's convenience, In the attached copy of drawing Figure 1, the numeral 38 is circled in pencil.

IN THE SPECIFICATION

A new abstract has been provided, as requested.

Antecedent basis has been provided for the limitations shown in claims 2 and 3.

The status of the prior application has been updated.

CLAIM OBJECTIONS

Renumbered claims are provided herewith. It was said that claims 6-11 have been deleted, and it was not applicant's intention to delete these claims. Claims 6-11 have thus been retained and are amended accordingly.

COMMENT ON PROSECUTION HISTORY

This application initially was filed as a provisional application on March 21, 1997, approximately seven years ago. The Applicant has a substantial concern with the amount of time it has taken to even bring the application to its current state.

The application previously was assigned to Examiner Stright. A personal interview was held with Examiner Stright, the Applicant and the undersigned on November 10, 2001. To provide for continued prosecution, a continuation application was filed shortly thereafter on December 27, 2001. A Preliminary Amendment and an Information Disclosure Statement were filed approximately five months later, on May 20, 2002. Several status requests were made. Finally, the status request mailed August 14, 2003 was responded to by the Patent and Trademark Office on September 11, 2003, the Office indicating that the application would be examined in seven to ten months. Finally, the instant Office Action was issued February 9, 2004. The case has been assigned to a different Examiner, and it appears that prosecution is beginning all over again.

The cooperation of the Examiner in bringing prosecution of this application to a successful and rapid conclusion is earnestly solicited.

THE INVENTION

The invention involves the ergonomics of a hand-operated syringe. The syringe has a pair of opposing finger grips for reception of fingers of a user's hand. "Distal"

refers to the end of a syringe that normally receives a hypodermic needle. The proximal end refers to the end that contains the finger grips.

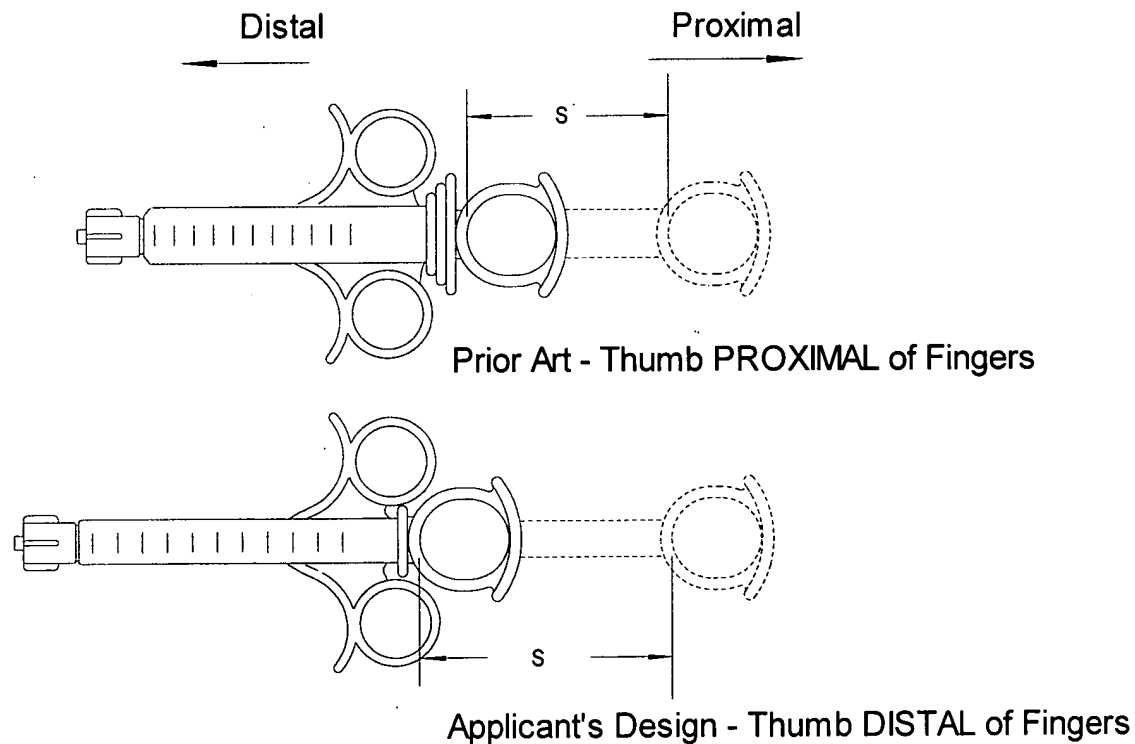
The syringe has an elongated barrel that contains a pair of opposing finger grips for reception of the index and middle fingers, respectively of the user's hand. These grips are carried at the proximal end of the barrel. Each grip has a generally distally facing gripping surface having an arcuate portion nearer the barrel than any other arcuate gripping surface portion. These arcuate portions nearer the barrel define a most proximal point on the arcuate gripping surfaces to which finger pressure is applied proximally during operation of the syringe, and these points define a plane substantially perpendicular to the barrel's axis.

A plunger is received in the barrel. It has a proximal end that protrudes from the barrel and that includes a pressure surface adapted to receive manual pressure. Of importance, when the plunger is fully received in the barrel, the pressure surface of the plunger is spaced distally of the plane defined by the earlier mentioned finger pressure points. This feature is illustrated in Figure 1 of the drawing. Here, the pressure surface 48 of the plunger is spaced distally of the plane defined by the pressure surfaces 46 by a distance L.

To those knowledgeable in the art of syringe design, for any given syringe barrel volume, a longer stroke allows for a smaller cross sectional area. A smaller cross sectional area creates a larger pressure for any given applied force. Therefore, any

increase in stroke length directly increases the generated pressure. The ability to generate high pressure is an important syringe performance characteristic.

None of the prior art, including that referenced in the recent office action, shows or anticipates this important design improvement. The applicant accomplishes the design goal of lengthening stroke within the constraint of hand ergonomics by uniquely designing the interaction between thumb and finger surfaces such that at full insertion, the thumb surface is distal of the finger surfaces.



THE REFERENCES

Although the limitation of the preceding paragraph is found in each of the claims, that limitation appears in none of the references cited by the Examiner.

The claims in the case have been rejected under § 102(b) as anticipated by Merit Med Systems, Inc. (1990) or NAMIC Angiographic Systems (1988). Looking first at the Merit Med Systems, Inc. sheet, the structure shown there prevents the pressure point of the plunger from extending distally of the pressure points of the finger grips. Note that each of the syringes depicted in this reference have a collar positioned proximally of the finger grips on the barrel and which would prevent the plunger from being depressed to the extent required by the claims. The NAMIC reference similarly shows a collar mounted at the proximal end of the barrel and that would prevent the thumb pressure point from extending distally of the finger pressure points. These references simply fail to show the invention, and the rejection under § 102 should be withdrawn.

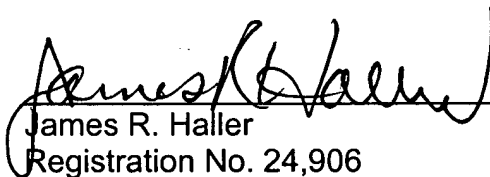
The claims also have been rejected under § 102(b) as anticipated by the Schneyder '190, Baum '238 or Osterhaus '699 patents. Even a quick view of the drawings of each of these patents show that the depicted syringes cannot function in the manner called out in the rejected claims. In none of these references can the pressure point of the plunger extend distally of the barrel-mounted finger grips. The rejection based on these references similarly, then, should be withdrawn.

CONCLUSION

After a wait of many years, the Applicant is understandably anxious to resolve this case and to obtain allowance of his claims. Prompt action with a view to allowing the claims is courteously solicited. If there are any points that the Examiner finds may be handled by Examiner's amendment, a telephone call to the undersigned would be appreciated.

Respectfully submitted,

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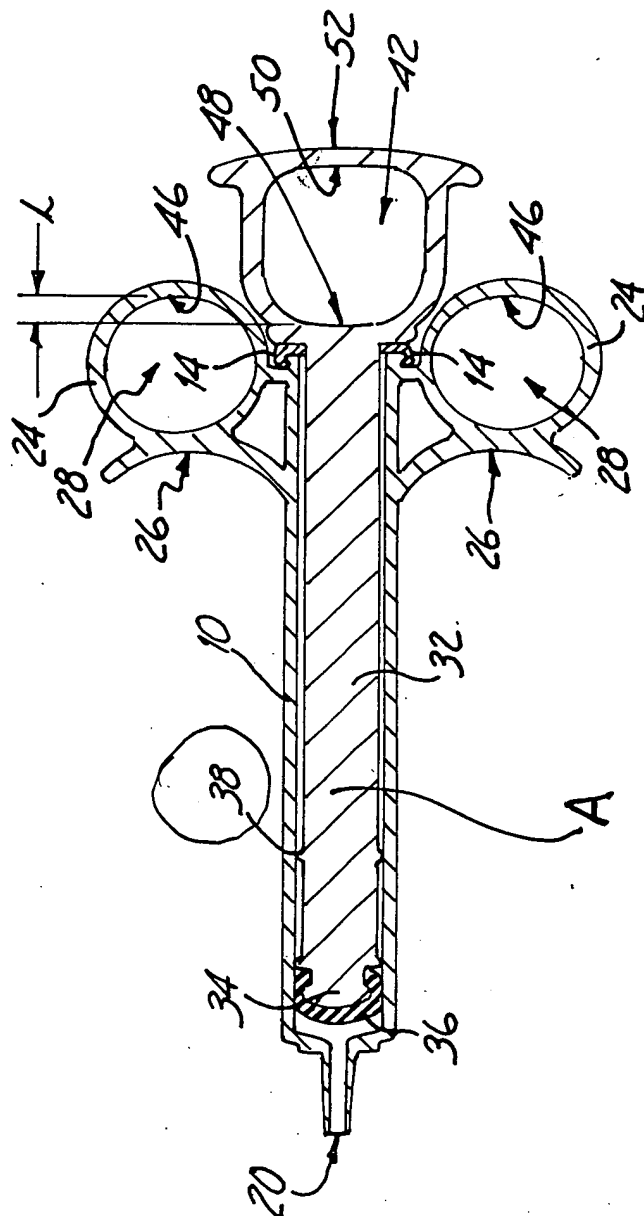


Fig. 1